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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,467	08/27/2003	Lex M. Cowser	ISIS0085-100 (ISIS-2960US)	6040
34138	7590	04/07/2006	EXAMINER	
COZEN O'CONNOR, P.C. 1900 MARKET STREET PHILADELPHIA, PA 19103-3508			SKIBINSKY, ANNA	
			ART UNIT	PAPER NUMBER
			1631	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/649,467	Applicant(s) COWSERT ET AL.	
	Examiner Anna Skibinsky	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/17/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-17, 23, 25, 26, 28-31 and 33-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-22, 24, 27, and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>25 pages</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reply to Applicant

1. Applicant's election with traverse of Group II, claims 18-32; Species A2 (Specie D) claim 24; Species B1 (Specie E), claim 27; Species C2 (Specie F), claim 32, in the reply filed on January 17, 2006 is acknowledged. The traversal is on the ground(s) that each of the groups in the restriction/election requirement were classified into an identical class and subclass, 702/19. This is not found persuasive because the class subclass, 702/19, pertaining to the bioinformatics arts contains within it 1000's of separate and distinct inventions. The traversal arguments put forth by applicant were answered in the restriction requirement. Attorney has made allegations without specifics as to why the restriction requirement is not proper.
2. The requirement is still deemed proper and is therefore made FINAL.
3. Claims 1-17, 23, 25-26, 28-31, and 33-45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on January 17, 2006.
4. Claims under examination are 18-22, 24, 27, 32.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 18-20, 24, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Agrafiotis et al. (US Patent No. 5,463,564, issues 10/31/1995).
7. Claims 18 and 19 recite a computer receiving an input for a computational oligomer to be synthesized, generating synthesis instructions for a synthesizer, and communicating said instructions, thereby providing the oligomer to be synthesized.
8. The prior art teaches a computer based system and method for automatically generating chemical entities with desired physical, chemical, an/or biological properties (col. 3, lines 27-30). A computer controls the structure-activity data for compounds (col. 3, lines 49-61) and generates new robotic synthesis instructions for the production of compounds with improved activity and/or properties (col. 3, line 62 to col. 4, line 9). A robot synthesizes the new chemical compounds based on the synthesis instructions (col. 4, lines 10-16).
9. The invention is applied to oligomers such bio-oligomers (col. 9, line 10).
10. Instant claim 19 recites that the input means is a computer. The prior art teaches that the structure and property is stored in a database (col. 3, lines 49-61) and that the method taught herein is carried out with a computer (col. 3, lines 28-31).

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11. Instant claim 20 recites that the computer is connected to a network. The prior art teaches that the system of the invention includes a databases, the instructions are communicated to a robot (col. 5, lines 23-31). This could include one or more robots (col. 7, lines 28-44) which, when connected to the computer that sends the instructions makes up a network as recited by the claim.

12. Instant claim 24 recites one prescribed property is sugar chemistry. The prior art teaches that the synthesis of the invention is applied to random bio-oligomers and peptidal peptidomimetics with a Beta-D-Glucose scaffolding (col. 9, lines 16-17). Since Glucose is a sugar, the property of such molecules involves said sugar chemistry.

13. Instant claim 32 recites an output means that is an automatic synthesizer. The prior art teaches the connection of a chemical synthesis robot that performs the synthesis chemistry based on the robotic synthesis instructions discussed above. The synthesis instructions are output to the synthesis robot (col. 7, lines 28-44) which is the robot.

14. Claims 18-20, 24, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Agrafiotis et al. (US Patent No. 6,421,612; filed 11/4/1997; priority date 11/4/1996).

15. Claim 18 recites receiving an input for a computational oligomer to be synthesized, generating synthesis instructions for a synthesizer, and communicating said instructions, thereby providing the oligomer to be synthesized.

16. The prior art teaches an automatic, manual and/or computational method for generating chemical entities having desired properties (col. 3, lines 32-36). The

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invention is applied to oligomers such as oligonucleotides (col. 2, lines 34-35; col. 3, lines 6-21) and other bio-oligomers (col. 39, line 30).

17. The prior art method is taught as being carried out by different components wherein the components read on the limitations recited by claim 1.

18. The Experiment Planner receives structure-property data from the a database which reads on the limitation of claim 18, lines 2-3. The structure property data are the physical, chemical and/or bioactive properties of the chemical entity (Abstract lines 8-9).

19. The Synthesis Module receives synthesis instructions from the Synthesis Protocol Generator which reads on the limitations of claim 18, lines 3-7. The Synthesis Protocol Generator has the synthesis instructions as recited in the limitation of claim 18, lines 3-4, which are called forth and communicated to the Synthesis Module. The final result of the prior art invention is, as stated above, to generate or "synthesize" chemical entities.

20. Instant claim 19 recites that the input means is a computer. The prior art teaches that the Structure-Property data comes from a database (col. 3, lines 53-58) and that the method taught herein is carried out with a computer (col. 3, lines 32-63).

21. Instant claim 20 recites that the computer is connected to a network. The prior art teaches that the system of the invention includes one or more databases, wherein if these databases are connected to supply information to the Experiment Planner, they form a network. Furthermore, the invention can be implemented fully or partially automated, with a computer and robotic system (col. 6, lines 56-65), and a variety of different connected modules are taught throughout the text. The connection of

databases, computer and robot, and modules for analysis (col. 40, lines 37-65) form a network as recited by the claim.

22. Instant claim 24 recites one prescribed property is sugar chemistry. The prior art teaches that the synthesis of the invention is applied to random bio-oligomers and peptidal peptidomimetics with a Beta-D-Glucose scaffolding (col. 39, lines 24-26). Since Glucose is a sugar, the property of such molecules involves said sugar chemistry.

23. Instant claim 32 recites an output means that is an automatic synthesizer. The prior art teaches the connection of a Synthesis Module which is a robot that performs the synthesis chemistry. The synthesis instructions are output to the Synthesis Module (col. 38, lines 31-51) which is the robot.

Claim Rejections - 35 USC § 112

24. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

25. Claims 18-22, 24, 27, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

26. Claim 18 recites "thereby providing the oligomer to be synthesized" after the synthesis instructions are communicated to the synthesizer. It is unclear how the synthesis instructions provide the oligomer to be synthesized. Does this mean that the structural properties of the oligomer are also communicated to the synthesizer? It is

unclear what is meant by "providing the oligomer" when what is communicated are synthesis instructions. Clarification of the metes and bounds of the claim is requested.

27. Claim 27 recites the limitation "the modification is a sugar modification". There is insufficient antecedent basis for this limitation in the claim. The limitation "the modification" of claim 27 is not found in claim 18 from which claim 27 depends. There is no antecedent basis for the "the modification" in claim 18.

28. Claim 32 recites "output means is an automated synthesizer". There is insufficient antecedent basis for this limitation in the claim. Claim 18, from which claim 32 depends does not recite an "output".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Skibinsky whose telephone number is (571) 272-4373. The examiner can normally be reached on 8 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ardin H. Marschel 4/1/06
ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER